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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,373	06/20/2003	Leslie W. Richards	CM-101US	8509

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EXAMINER	
HECKENBERG JR, DONALD H	

ART UNIT	PAPER NUMBER
1722	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/600,373	RICHARDS, LESLIE W.	
	Examiner	Art Unit	
	Donald Heckenberg	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *26-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10,11,14-22 and 25* is/are rejected.

7)☒ Claim(s) *8,9,12,13,23 and 24* is/are objected to.

8)☒ Claim(s) *1-28* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date --.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-25, drawn to a plug baffle device, classified in class 249, subclass 79.

II. Claims 26-28, drawn to a method of making a plug baffle device, classified in class 29, subclass 428.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as a process wherein the fin is attached to the base member using screws, as opposed to urging a fin end portion into a receiving channel in the base member.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Peter Jansson (Applicant's Representative) on October 20, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-25. Affirmation of this election must be made by Applicant in replying to this Office action. Claims 26-28 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. The following is a suggestion that would improve the clarity of the claims:

Claim 22 recites "the coolant-encountering fin extension" in lines 7 and 8. Previous to this reference, this structure had been referred to as "the coolant-encountering fin." It would be better to use consistent language throughout the claims.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 10, 14, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim 10 recites the limitation "the blade" in line 2. Similarly, claim 14 recites "the blade" in line 2, and claim 25 recites "the blade" in line 2. There is insufficient antecedent basis for this limitation in the claim. As can best be discerned from the disclosure of the instant application, this limitation is referring to a part that makes up the coolant-encountering fin, and the limitation will be interpreted as such for the rest of this Office Action. However, appropriate clarification and correction are required.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-6 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Pub. No. 06-182770 (hereinafter "JP '770"; reference below will be made to the drawings of this reference as well as the computer translation and English abstract also made of record with this Office Action).

JP '770 discloses a plug baffle device for installation in a coolant passage of a mold. The plug baffle device comprises a plate-like coolant encountering fin (14) and a base member (18) having a mold-connection portion (see figs. 1 and 2).

JP '770 further discloses the base member to be mechanically attached to the coolant encountering fin through a mating connection which utilizes a male interconnecting member and a female interconnecting member (see fig. 1). More specifically, the female interconnecting member defines a fin receiving channel (19 and 20) having a channel cross section, and the male interconnecting member has a T-shaped base engaging portion (16 and 17), with the base engaging portion cross-section complementary to the channel cross section (see figs. 1 and 2). To be even more specific, the female interconnecting member defines a fin-receiving space which has an axially facing entrance of first cross-sectional area (20), the fin receiving space also having a second cross-section area (19) axially spaced from the entrance, with the second cross-sectional area

being greater than the first cross-sectional area, and the male interconnecting member has a third cross-sectional area (17) which is greater than the first cross-sectional area, thereby preventing axial disengagement of the fin from the base member (see fig. 1). The male interconnecting member is integral with the coolant-encountering fin and the female interconnecting member is integral with the base member (see fig. 1).

10. Claims 1-5 and 15, 16, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Pub. No. 08-258046 (hereinafter "JP '046"; reference below will be made to the drawings of this reference as well as the computer translation and English abstract also made of record with this Office Action).

JP '046 discloses, in the embodiment shown in figures 1 and 2, a plug baffle device for installation in a coolant passage of a mold. The plug baffle device comprises a plate-like coolant encountering fin (1b) and a base member (2, 3, and 4) mechanically attached thereto, with the base member having a mold-connection portion (see figs. 1 and 2).

JP '046 further discloses that the fin and base member are attached to one another through a mating connection accomplished by a male interconnecting member (5a) and a female

interconnecting member (3a). The male interconnecting member is integral with the coolant-encountering fin (1b) and the female interconnecting member is integral with the base member (4). More specifically, the female interconnecting member defines a fin receiving channel having a channel cross section, and the male interconnecting member as a base engaging portion with a base-engaging portion cross-section complementary to the channel cross-section (see figs. 1 and 2).

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 7, 11 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '046 in view of Applicant's admitted prior art.

JP '046 discloses the plug baffle device as described above. JP '046 further discloses the base member to include a mold connection portion (2) that is substantially cylindrical with a threaded outer surface (see fig. 2). The base member also includes an extension portion (4) that extends from the mold connection portion, with the extension portion having the female interconnecting member (3).

JP '046 does not disclose the base member's cylindrical portion to include a tool-engaging socket opening. However, Applicant discloses that prior art plug baffle devices are known to have tool-engaging socket opening at the cylindrical base portion for the purpose of allowing the plug baffle device to be screwed using an Allen wrench into a port in the mold (see specification of the instant application at p. 9, ll. 1-3). Thus, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the plug baffle device disclosed by JP '046 as such to further comprise a tool-engaging socket in the cylindrical base because

this would have allowed the device to be screwed into the port of a mold by an Allen wrench as suggested by Applicant's admitted prior art.

14. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '770 in view of Lin (U.S. Pat. No. 5,945,140).

JP '770 discloses the plug baffle device as described above, including a plate-like cool-contacting portion of the fin. JP '770 does not disclose the fin to have a coolant-contacting portion which is helical.

Lin discloses a molding system which includes a coolant contacting fin (3). Lin provides the coolant-contacting portion (33) of the fin as helical for the purpose of providing better cooling towards the bottom of the coolant passage than is achieved with a plate-like coolant contacting fin portion (see cl. 1, ll. 44-47, cl. 1, l. 64 - cl. 2, l. 1).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modified the plug baffle device disclosed by JP '770 as such to provide the fin with a helical coolant-contacting portion because a helical coolant-contacting portion provides better cooling towards the

bottom of the coolant passage than a plate-like coolant-contacting portion as suggested by Lin.

15. Claims 8, 9, 12, 13, 23 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. Claims 10, 14, and 25 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest a plug baffle device with the combination of features defined in claims 8, 10, 12, 14, 23, and 25. The closest prior art disclosed by JP '770, JP '046, and Lin is described above. None of these references, or any of the other prior art of record, teaches or suggest the tool-engaging socket provided in the mold connection portion of the device to have an axial depth which is at least 80% of the axial length of the threaded outer surface of the mold connection portion as defined

in claims 8 and 23. The prior art of record also does not teach or suggest the extension portion of the mold connection portion to narrow toward the coolant-encountering fin to thereby provide lateral flow space adjacent thereto as defined in claims 14 and 25.

18. The following references cited but not relied upon are deemed pertinent to the instant application:

Kelly (U.S. Pat. No. 2,770,011) discloses an injection molding machine with provided with plug baffle devices.

Stippich (U.S. Pat. No. 3,548,863) discloses a baffle for coolant passages in plastic molding dies.

Veldhoff (U.S. Pat. No. 4,800,953) discloses a baffle for a coolant passage.

Mitake (U.S. Pat. No. 4,966,544) discloses an injection mold having cooling fins.

Pleasant et al. (U.S. Pat. No. 6,168,415) discloses a baffle.

JP 11-42644 discloses plug baffle device for installation in a coolant passage in a mold which comprises a base member mechanically attached to the coolant encountering fin. Note the computer translation and English abstract of this document also made of record with this Office Action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (571) 272-1131. The examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Utech, can be reached at (571) 272-1137. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions

on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

11-15-04

Donald Heckenberg
A.U. 1722